

## BIBLIOGRAPHICAL NOTICES.

*The Grasses of Scotland.* By Richard Parnell, M.D., F.R.S.E., &c.  
Illustrated by Figures drawn and engraved by the Author. 8vo.  
Edinburgh, 1842.

It is not an easy thing to determine upon the best mode of bringing such a work as the present under the notice of our readers; for if we were to write a dissertation upon the modes that have been adopted by different authors for the classification of Grasses, however useful or amusing such a treatise might be, it could not be considered as a review of Dr. Parnell's work: on the other hand, if, leaving such extensive generalizations as must be inseparable from the above plan, we were to confine ourselves to an examination of the details of the work before us, we should produce a dry list of annotations, or kind of commentary on the book, but should be far from conveying any idea of its value to others.

It is necessary, however, that we should adopt some plan, and therefore we will first state what Dr. Parnell appears to have had in view, and then entering slightly into detail, endeavour to point out the mode that he has followed and the extent to which we consider that it has been attended with success. Our author is well known to many of our readers as a successful cultivator of the science of Ichthyology, and, from his being totally unknown as a botanist, we must confess that the announcement of the present work rather raised our curiosity than our expectations; but having now examined very many parts both of the descriptions and figures in a far more minute manner than is usual, not to say with reviewers, but even with students, we can confidently say that there is no part of British botany so thoroughly and successfully illustrated as the Scottish (would that we could say British) Grasses.

The author's object appears rather to have been the determination of species than distinction of genera, for that portion of his book which is occupied with the characters of the latter is greatly circumscribed, and the distinctions between them are far from being explained as is expected in a monograph. On the other hand, the descriptions of the species are given in fully as much detail as could be desired, and are so arranged that the same portion of each refers, in as nearly as possible the same words, to a similar part of the respective plants, thus producing descriptions every clause of which is admirably contrasted with the corresponding portion of the next. At the end of each description the points in which the respective species differ from the other plants contained in the same genus are placed in so clear a light, that it is almost, if not quite, impossible for the student to be at a loss in determining to which species his specimens would be referred by the author. The work is illustrated by sixty-six plates drawn by the author, in which are contained accurate figures of all the species, and most of the varieties of grasses that have been found in Scotland. To each of the figures is appended a dissection of the spikelet, showing the form and structure of the glumes and paleæ, upon which many of the characters which distinguish the plants depend.

We must now enter a little into detail. The author has paid peculiar attention to the elucidation of the species included in the difficult genera *Bromus* and *Poa*. In the former he has successfully applied some new characters to the distinction of those difficult species, *B. mollis*, *B. racemosus*, *B. arvensis* (or rather *commutatus*), and *B. secalinus*; and in the latter he has used throughout the genus characters, founded upon the webbed flowers, the nerves of the paleæ, the sheaths of the leaves, the ligules, and the joints of the stem, which had not previously been employed in more than a few species. The result has been that several forms of *Poa* which appear to have great claims to specific rank have been detected, and it seems probable that when all the British plants belonging to this genus have been examined with equal care, that several other additions will require to be made to our list. Dr. Parnell distinguishes *P. cæsia*, *P. montana* (a new species), and *P. Balfouri*,\* (n.s.) from *P. nemoralis*, and *P. polynoda* (n.s.) from *P. compressa*. He considers his *P. montana* to be the *P. nemoralis*, var. *montana*, of Koch's 'Synopsis'; but for this there do not seem to be sufficient grounds, and the Scottish plant is probably a species not before recorded.

Three genera not usually recognized in this country have been adopted, namely, *Amenagrostis*, *Bucetum*, and *Trisetum*. To the former, which includes the *Agrostis spica-venti* alone, we have nothing to object except its name, which ought to have been *Apera*. Concerning the other two it will be necessary to speak at greater length. To *Bucetum* (a name invented by Dr. Parnell) he refers the *Festuca elatior*, *F. pratensis*, *F. loliacea*, and *F. gigantea* of authors. All these we refer to *Festuca*, considering the three former as belonging to one variable species. The only distinctions that we can detect between *Bucetum* and *Festuca* are, that the awned midrib is not attached to the palea quite to its summit in the former, and that the radical leaves are broader than those of the stem; whilst in *Festuca* the awn is (usually) quite terminal, and the stem leaves are broader than the radical. We do not consider this as a sufficient reason for constituting a new genus.

In *Trisetum*, the third genus to which we have referred, our author places *Avena pratensis* (including as varieties *A. alpina* and *A. planiculmis*) and *A. pubescens* in addition to *A. flavescens*, which has been often referred to that genus. As he has not contrasted the characters of *Avena* and *Trisetum*, it is rather difficult to ascertain upon what he would found their distinctions; indeed the short generic definitions do not afford any tangible point, except that *Avena* is included in the section "calyx containing two florets," and *Trisetum* in that with "the calyx containing three or more florets." Now this would exclude from the genus *Avena* several true *Oats*, such as *A. sterilis*, which often has four florets; *A. fatua*, in which three florets is as common as two; and *A. nuda* is often, if not usually, three-flowered. A character may certainly be found in the fewer ribs of the glumes and paleæ of Parnell's *Trisetum*, but that cannot be a suffi-

\* This new grass was figured and described in vol. x. p. 121 of this Journal.

cient reason for combining plants with "crested and furrowed fruit" with the true genus *Trisetum*, in which that part is "neither crested nor furrowed." It appears then to us that the genus *Trisetum* should be confined (as far as Britain is concerned) to the *A. flavescens* of Linnæus, and that the other species of Parnell ought to be considered as belonging to *Avena*.

We must, however, draw these observations to a conclusion, and in doing so beg to congratulate the author upon the appearance of so creditable a book, and express a hope that he will not relax in his pursuit until he has illustrated in a similar manner at least all the British Grasses. At the same time we would hint, that a little more attention to the fine nerves on the calyx and corolla, which we do not find represented on some of the plates, although they exist in nature, and also to a representation of the ligule in all cases, would be highly desirable.

*Histoire Naturelle des Poissons d'eau douce de l'Europe centrale*, par L. Agassiz. *Embryologie des Salmones*, par C. Vogt. Neuchatel, 1842. 8vo, pp. 326.

Many of our readers will be aware that the first number of this work appeared some years since as an atlas of lithographic figures, representing several species of the *Salmonidæ* of central Europe in their various stages; the second number of these plates has now been received, devoted entirely to embryology, and with it a volume of letter-press by M. C. Vogt, to which they serve as illustrations. In the short preface by the author of the text, it is stated, that with the view of rendering the history of the freshwater fishes of Europe as complete as possible, M. Agassiz requested his assistance, and the observations were begun together towards the end of the year 1839. "Cependant," continues M. Vogt, "des travaux plus pressans empêchèrent plus tard M. Agassiz d'y consacrer tous ses soins, et comme ce genre d'étude exigeait des observations non interrompues et trop fréquentes pour que l'un ou l'autre eût pu se dispenser d'y vouer tout son temps, je fus chargé d'achever seul ce travail. En me confiant une tâche aussi honorable, mon célèbre ami n'est cependant point resté étranger à mes recherches. Nous avons discuté ensemble les faits capitaux, à mesure que l'observation me les révélait; souvent même nous les avons examinés de nouveau en commun, et lorsque j'eus rédigé mon travail, c'est encore lui qui a bien voulu le revoir." The plan pursued in the work has been to take one species, and to examine the progressive development of the germ in all its parts; for this purpose a species of *Coregonus* has been selected (*C. palea*, Cuv.), probably on account of being easily procured, and the ova which have been used have all been impregnated artificially. We could have wished that the observations had been made upon a typical member of the family, for although the differences may be comparatively small, the whole habit of the *Coregoni*, their spawning and impregnation, are closely similar to those of the *Clupeadæ*; nevertheless the volume is an important addition both to embryology and to the commencement of the structure of the

Salmons. It is confined almost to a journal of facts which seem to have been very carefully observed, M. Vogt having abstained, in a great measure, from attempts to generalize or to draw a comparison between the embryology of other classes, either higher or lower, for which purposes he considers that materials do not exist. "Embryologie, envisagée comme science, n'a guère été jusqu'à présent que l'histoire du développement de l'œuf de la poule, et l'on s'est généralement borné à indiquer les différences qu'on remarquait à l'égard de certains organes dans d'autres animaux, souvent sans avoir fait une étude spéciale de ces dernières; ce qui a donné lieu plus d'une fois à des rapprochemens inexacts." The work is divided into fourteen chapters, of which we give the titles.

Chap. I. *L'œuf avant la fécondation*.—A general description of the ovum in this state is given. The vitellus and vitellary membrane are the parts which increase most rapidly; but the germinating vesicle and germinating spots increase also, though in less proportion. The growth of the latter has been denied, but it is so evident in the ova of the *C. palea* as to be easily perceived. The surface of the ova is stated to be smooth and without any of that viscous covering which assists in attaching those of many other fishes to plants or stones, &c. "The ova of *C. palea*, like that of all the Salmons, is delivered free, and left to the mercy of the waves." This we have considered as one of the points of distinction in the œconomy of the *Coregoni* and the *Chupeadæ*, compared with the true Salmons: in the first, the ova are deposited "on the waters," and impregnated at the same time; among the latter they are deposited on the ground, and are never removed from the furrow and gravel where they have been placed by the parent fish.

Chap. II. *Fécondation; condition de développement; maladies de l'œuf; méthode d'observation*.—The manner in which M. Vogt artificially impregnated the ova is described, differing little from that practised by Mr. Shaw of Drumlanrigg; various causes, however, seem to influence their development, some of which appear curious. "To bring them successfully to perfection, I believe it is necessary that they should be kept in the same water in which the fish has been accustomed to spawn. I have had experience of the fact, that the ova of the salmon trout which spawns in the rivers are destroyed when placed in the waters of the lake; while those of *C. palea* which spawns in the lake itself do not succeed in the water of the rivers. I have even been unable to bring to their term the ova of the pike of the marshes, which spawns earlier than that of the lake, though the fishes do not differ generically." Sudden violent changes of temperature are fatal, but a gradual cold, even though the ova were enclosed in ice, only retarded the progress. A disease attacks the ova in various stages, and is very fatal to the newly-hatched young; it is the growth of a cryptogamous plant or species of mould, considered analogous to that which M. Hannover has observed on different tritons, and perhaps also somewhat similar to that which has of late received attention in this country as vegetating upon living fishes.

Chap. III. *De l'œuf fécondé et du germe.*—Treating of the milt or sperm, M. Vogt writes, “On ne sait cependant presque rien du rôle que les différentes parties de cette liqueur jouent dans la fécondation. Je me suis donné toutes les peines possibles pour savoir comment se comportent, dans la fécondation, ces animalcules spermatiques de la *palea*, mais en vain.” The rotatory motion of the vitellus known in the ova of Mollusca, and observed in those of Mammalia by Bischoff, has not been noticed in the ova of the *C. palea*, which seem on the contrary to remain in the same position, the oily disc being turned upwards. At certain periods after fecundation furrows and small regular elevations are discovered on one side of the ova: M. Vogt observes, “I consider that the ova of fishes are distinguished from those of many other animals, and in particular from those of the frog, inasmuch as these furrows affect only the germ and never the vitellus, and cannot in reality be formed in any other manner, since in the egg of the *C. palea* the vitellus is completely deprived of cellules.” And in speaking of the primitive formation of the germ, he concludes with the following sentence, printed in italics:—“*Les cellules du germe embryonique se développent des taches germinatives, que par conséquent les taches germinatives sont en réalité les véritables cellules embryonnaires primitives, et que, dans les poissons, elles forment à elles seules le premier rudiment de l'embryon.*”

Chap. IV. *L'embryon jusqu'à la fermeture du sillon dorsal.*—M. Vogt considers that the true embryonic development does not commence until the divisions of the germ into two parts, the embryo and vitellary vesicle; previous to this the embryo is only a simple enlargement of the cellules. The first appearance of the embryo takes place under the form of a linear and uniform enlargement of the cellules which form the embryonic substance; in short, that this “*bande primitive*,” as it is named by M. Baer, exists in fishes as well as in the fowl or birds; but he does not think with M. Baer that it is the commencement or forerunner of the vertebral column, nor the primitive form of the cerebro-spinal system. The transformation of the cephalic or anterior part of the furrow into many distinct divisions is the first index of the central nervous system, composed of the brain and spinal marrow. This transformation is not characterized by a new formation of cellules, nor by the appearance of cellules of a particular structure.

Chap. V. *Développement du système nerveux central.*

Chap. VI. *Développement des organes des sens.*—Speaking of the eye, where, in the embryo of the higher classes, it has been advanced that the two ocular sinuses are at first united, M. Vogt states, that “in fishes at least I can affirm that the ocular sinuses are situate from the commencement upon the sides of the head, deeply separated by the cavity of the mesencephale. Of the ear, the first traces of the auditory organs show themselves when the formation of the crystalline sinus begins to appear in the eye. The nose, or development of smell, appears later than the other organs of the senses.

Chap. VII. *Développement du squelette.*—In summing up a portion of this chapter, M. Vogt combats the doctrine of the cranium being composed of and divisible into different vertebræ, and brings the structure of the embryo to his assistance; he concludes by stating, “that the cranium of the embryo does not present, like the trunk, vertebral divisions;” and he continues, “Je dis qu’il n’existe dans le crâne qu’une seule vertèbre, la vertèbre occipitale; tous qui est en avant doit être envisagé comme un prolongement de cette vertèbre, destinée, comme la vertèbre occipitale elle-même, à servir d’appui aux organes des sens et particulièrement à l’oreille.”

He names the maxillary and bronchial apparatus, with the tongue and opercular system, “pièces viscérales de la tête,” and considers them not distinctly separated during the embryonic development. The ventral fins do not appear until a considerable time after exclusion. “There never exists the smallest communication between these fins and the rest of the skeleton;” and for this reason, and their variable position, he considers the ventrals as locomotive organs PECULIAR to fishes, and not as the true analogues of the posterior extremities of the higher Vertebrata.

Chap. VIII. *Développement de la peau et des muscles.*

Chap. IX. *Développement des intestins.*—Of the kidneys it is remarked, they have evidently other functions among the osseous fishes than in the higher animals; they do not correspond with the true kidneys of the last, but rather to their embryonic rudiments, “les corps de Wolff.” This opinion already advanced is here confirmed by the early appearance of these isolated bodies, by the development of their secretory canals, and by their position and extension along the vertebral column, which reminds one in every respect of the “corps de Wolff.”

Chap. X. *Développement du système sanguin.*—The formation of the blood-cellules depends much on external circumstances: when the embryos were placed in a vessel with a dark or black bottom, although the general development went successfully on, the circulation was found to be retarded, only rare and isolated blood-cellules were seen in the vessels, and even the development of the blood-vessels themselves seemed to be kept back, compared with other parts of the structure; on placing again the embryos in a vessel with a white bottom, all the blood-vessels were filled with the blood-cellules, and in twenty-four hours the circulation appeared admirably developed. From these facts it is concluded that light has a considerable influence on the formation of the blood, and that the cellular life of the embryo and the development of the organs depend little on the circulation; this only acquires its importance after the transformation of the cellules into other constituting elements, which cannot subsist or be continued without a greater or less quantity of alimentary matter furnished by the blood.

Chap. XI. *Conformation extérieure de l’embryon.*

Chap. XII. *Développement des tissus en général.*—All the tissues are considered to have their origin from *cellules* of different kinds,

and in regard to the primitive formation of these cells it is remarked,—“1°, chaque cellule naît isolement ; 2°, chaque cellule se forme autour d'un centre donné.”

Chap. XIII. *Système générale de la formation embryonique.*

Chap. XIV. *Aperçu historique de la marche du développement.*—

This details the appearance and condition of the ovum and embryo from the time of the expulsion of the former from the fish to the exclusion of the embryo, through a period of from forty to sixty days. As we previously observed, the whole work will be of much importance to embryologists ; and we would only make the suggestion, that as the ova experimented on, and the young fish after exclusion, (in which state they could not be kept beyond a month alive,) were often in a condition rather unhealthy,—could M. Vogt depend on the progress and development continuing to their greatest extent ?

The plates of the atlas are beautifully and minutely lithographed.

*Narrative of a Residence on the Mosquito Shore, during the years 1839, 1840, 1841.* By Thomas Young. 8vo. London, 1842. Smith, Elder, and Co.

Although this little volume, written by the Deputy-Superintendent of the British Central American Land Company's settlements on the Mosquito Shore, only pretends to being considered as a “sort of hand-book” for settlers in that promising district of the New World, it appears to us to be highly deserving of the attention of the naturalist. The author is manifestly one of those who never visit any country without having their “eyes open” to whatever they may meet with, and accordingly without being a professed naturalist, or apparently knowing anything of scientific natural history, he has filled his book with interesting observations upon the native productions of the land in which his lot was temporarily cast. His account of the native tribes cannot fail highly to interest those who study the natural history of man, and his observations upon the animals and vegetables are full of facts deserving of the attention of the man of science. It is certainly most unfortunate that a person so well qualified for scientific observations should not have that acquaintance with science which would enable him to refer his facts to their respective species, so as to make them available for the use of the home naturalist. As, however, he has given the native names, a person on the spot would probably find little difficulty in determining the species. We have no room for extracts, but one statement has struck us as so interesting, and so similar in some respects to a disputed observation of Audubon upon the pigeon of the United States, that we must make room for it:—

“The large flights of green parrots and yellow-tails, in the Black river, will hardly be credited ; flight after flight passing over our heads, and settling just at sunset on some tall spreading trees ; indeed on one occasion such quantities alighted on a tree at the back of our encampment that a large branch broke off, and the noise that ensued was laughable ; such callings, scoldings, and screamings, I never heard before.”—Page 100.

*Report on the Invertebrata of Massachusetts, comprising the Mollusca, Crustacea, Annelida, and Radiata.* Published agreeably to an order of the Legislature, by the Commissioners on the Zoological and Botanical Survey of the State. Cambridge, 1841. 8vo.

Washington, if we remember rightly, on abdicating the Presidency of the United States, put into his valedictory address a recommendation of the sciences to the protection and encouragement of the young Republic; and we look upon the 'Report' before us as one of many proofs which the separate "States" have given of their attention to their father's legacy. And naturalists in particular must be grateful to the "Legislatures" that so devote a share of the public purse; for in all new countries—we fear that we may safely add, and in all old ones too—the scientific study of living beings, that is, studied independently of their uses or relations to man, and merely as constituent parts of God's creation, his wisdom, and power, can have few followers when and where all are busy idolaters of Mammon and his legion.

"Appointed, as I suppose myself to have been," says Dr. Gould, "under that section of the Constitution which enjoins it upon the legislature to encourage the arts and sciences, and to promote, among other things, '*a natural history of the country*,' I have ventured to make my 'Report' mainly of a scientific character. It was the only way in which my labours could prove of much practical value, inasmuch as very few of the objects, belonging to the portion of the animal kingdom to which my attention has been given, are of much general interest, or of much importance in an œconomical point of view. I could not but suppose that an effort to contribute something towards that branch of science, which we have hitherto received entirely at the hands of other states and other lands, would be desired and approved; and that Massachusetts, which first set the example in those investigations of territorial natural resources, which have since been undertaken by almost every state in the Union, would not desire to be behind any of the states in this respect. I have, therefore, undertaken to present something more than a mere array of names in the form of a catalogue.

"As I could not extend my plan fully to all the objects assigned me, I have selected the SHELLS, on which to bestow my chief attention. These I have endeavoured to describe and figure in such a manner that the 'Report' might be used as a school-manual for the study of the conchology of New England. Such a work is greatly in demand, and nothing of the kind is in existence."

The want here indicated, it gives us unfeigned pleasure to say, has been most ably supplied by Dr. Augustus A. Gould, who has given a correct description of every mollusc found up to the period of his publication on the shores of Massachusetts, accompanied with a judicious synonymy, and with critical remarks of much value. The work has peculiar claims to the attention of the British naturalist, for he will find here many shells identical with those of his own island, many that bear a close resemblance to other natives and yet distinct, and several that are the living representatives of shells that with us have



passed into a fossil state. The figures that illustrate this well-printed volume are 213 in number, and are very accurately drawn and engraved. The number of species described is 268, of which there are of *Cirripedes* 12, *Conchifera* 92, *Brachiopoda* 2, *Gasteropoda* 154. Of these, 29 belong to the land, 42 to fresh water, and 197 are marine.

Relative to their geographical distribution Dr. Gould remarks :—  
 “ The land and fresh water univalves are all distributed over every part of the territory, with the exceptions of *Helix hortensis*, which is as yet confined to some parts of the sea-coast, and *Helix tridentata*, *hirsuta*, and *monodon*, which are found only in the interior and western portions. Of the freshwater mussels we find *Unio complanatus*, *radiatus*, and probably *nasutus*, in every region ; *U. cariosus* is only found in the Connecticut and its tributaries, and in Plymouth ponds ; *Anodon cataracta*, and *Alasm. arcuata* and *marginata* are found everywhere in the interior, while *Anodon implicata* is perhaps entirely limited, in this state, to ponds in Essex and Middlesex, and *Anodon undulata* to Blackstone river and its branches.

“ The distribution of the marine shells is well worthy of notice as a geological fact. Cape Cod, the right arm of the Commonwealth, reaches out into the ocean some fifty or sixty miles. It is nowhere many miles wide ; but this narrow point of land has hitherto proved a barrier to the migrations of many species of Mollusca. Several genera and numerous species, which are separated by the intervention of only a few miles of land, are effectually prevented from intermingling by the Cape, and do not pass from one side to the other. No specimen of *Cochlodesma*, *Montacuta*, *Cumingia*, *Corbula*, *Ianthina*, *Tornatella*, *Vermetus*, *Columbella*, *Cerithium*, *Pyrula*, or *Ranella*, has as yet been found to the north of Cape Cod ; while *Panopæa*, *Glycymeris*, *Terebratula*, *Cemoria*, *Trichotropis*, *Rostellaria*, *Cancellaria*, and probably *Cyprina* and *Cardita*, do not seem to have passed to the south of it. Of the 197 marine species, 83 do not pass to the south shore, and 50 are not found on the north shore, of the Cape. The remaining 64 take a wider range, and are found on both sides. Buzzard’s bay and the south shore have as yet been very little explored ; and we may yet expect to find many species peculiar to those localities.

“ At least seventy of our species are also found on the transatlantic shores ; and more than twenty of these have been described by different American conchologists as new species. About twenty may be regarded as intermediate, being found most frequently by fishermen about the banks, Newfoundland, and the islands intervening between Greenland and England.”—Page 315–316.

Dr. Gould has too seldom noticed the animal of the shells he has so well described ; his account of the *Mollusca Nudibranchia* is meagre, and the list scanty ; of the *Cephalopoda*, two species only are catalogued ; and his catalogue of the *Crustacea*, *Annelida*, and *Radiata* is useless, and needs to be worked anew. The Doctor is well aware of the truth of this censure :—“ The list,” he says, “ serves to show that we have about us an abundance of animals which have hitherto found few devotees in this country. So few gleanings have been made in this field, that no other promises a more

abundant return for labour.”—Page 352. All naturalists would rejoice could we promise them that Dr. Gould will himself cultivate this field, for then the harvest would be assuredly rich.

*Figures of Molluscous Animals, selected from various Authors; etched for the use of Students.* By Maria-Emma Gray. Vol. I. London, 1842. 8vo.

The distinguishing characteristic of this volume is its utility. In this country we have no work which, in this point of view, can be compared with it. Bowdich attempted something similar in his ‘Elements,’ but on a much more limited scale and in a less perfect manner; while Sowerby’s ‘Genera,’ being purely conchological, does not supply the naturalist with a very important desideratum, for which we are infinitely indebted to the skill and perseverance of Mrs. Gray.

The volume contains eighty-eight plates, most of them occupied with several figures, copied in general from rare and expensive publications beyond our reach, and, we presume, beyond the reach of all that reside in the country. The plates are etched with neatness and precision, and bring out very clearly the peculiarities of the animals that distinguish the several genera: and, says Mrs. Gray, “as the present work has been a labour of love, in order to bring it within the reach of conchologists of limited means, it is published at the cost of paper and printing, with only the addition requisite to cover the retail profit of the bookseller.”

To the student who is anxious to cultivate conchology as a science, we would recommend this convenient volume as a remembrancer and guide, for genera which are established solely on the examination of the shell can have no sure foundation, as many recent examples have proved. To the amateur, the “Figures” must, in our opinion, prove eminently interesting; for, from a perusal of them, he will learn a great deal of the structure of the creatures to whom he owes the cabinet of shells that he has so often looked over with admiration and delight.

In the hope that we may soon see another volume, we take leave at present of Mrs. Gray, tendering her our most hearty thanks for this useful contribution to a favourite branch of science.

*The Naturalist’s Library*, vol. xxxv. :—*Mammalia*, vol. xiii. *Introduction.* By Lieut.-Col. C. Hamilton Smith, K.H. & K.W., F.R. & L.S., &c. 12mo. 1842. pp. 313.

The thirteenth and concluding number of that portion of the ‘Naturalist’s Library’ which treats of the Mammalia having just reached us, we lose no time in introducing it to the favourable regard of our readers. Whether it were of design that the Introductory volume of this interesting section of natural history, according to an acknowledged canon of bookmaking, was delayed to the last, we have no means of knowing; but we may remark, that it at all events affords a good illustration of the advantages of the plan. After a few prefatory remarks, the distinguished author takes a rapid survey of all the orders of the class, making a special reference “to the principal families which have not been described at length in the foregoing

volumes;" whilst at the same time he by no means neglects even these, but almost without exception illustrates them by observations drawn from his own ample stores of information, as well as by the more recent discoveries of other naturalists. Nor does he confine his attention solely to existing animals, but furnishes likewise a rapid survey of such as belong to palæontology, including the extinct as well as the living species; thereby undoubtedly supplying the most comprehensive and interesting account which the subject affords. Hence this volume, in many particulars, throws light upon the preceding ones of the series; at the same time, alone, it presents a lucid summary of the whole extensive department to which it is devoted.

Maintaining all due respect for the classified arrangement of the Baron Cuvier, Col. Hamilton Smith suggests another, in which there are considerable modifications. Thus, instead of the well-known arrangement of the Baron, upon which we need not dwell, the Colonel divides the class Mammalia into two subclasses and twelve orders, as follows: — I. Subclass PLACENTALIA, including ten Orders, namely, *Bimana*, *Quadrumana*, *Chiroptera*, *Insectivora*, *Carnivora*, *Cetacea*, *Pachydermata*, *Ruminantia*, *Edentata* and *Rodentia*; and II. Subclass IMPLACENTALIA, including the *Marsupialia* and the *Monotremata*. There are various improvements here, as well as in the arrangement of many of the minor groups, which we cannot particularize; a general commendation, to which we take leave to append only one remark, and that regarding the inexpediency of the introduction of the first Order, or *Bimana*.

Did space permit, we should gladly have indulged ourselves by supplying some of the interesting information, scientific and popular, which the author with great industry has collected from almost every quarter of the globe. We have been most struck with this in the Order *Carnivora*, concerning the Felines, the Ermines and other *Mustelidæ*, the Bears and other *Ursidæ*, the Otters, Seals, and *Ruminantia*. Nor, as will readily be credited, has the pencil been wanting more than the pen, a considerable proportion of the portraits of the different animals being taken from life; and these, with all the others, derived from the best sources, especially the different museums, domestic and foreign, exhibit in a high degree the taste and execution of the able author.

We have still to add, that the value of the volume is considerably enhanced by an original memoir of Dr. Drury, an eminent entomologist of the last century, who died in the year 1763. Ample materials for the notice, including a correspondence with contemporary zoologists, have been kindly supplied by the descendants of the zealous naturalist, and these have been very judiciously arranged by the talented author of the biography.

#### *Books received.*

*Nomenclator Zoologicus, continens nomina systematica generum animalium tam viventium quam fossilium, secundum ordinem alphabeticum disposita, adjectis auctoribus, libris in quibus reperiuntur, anno editionis, etymologia, et familiis ad quas pertinent, in variis classibus.* Auctore L. Agassiz. Fasciculus II. continens Aves: 4to, 1842, pp. 90.

A work indispensable to the working ornithologist, carefully executed, and having the advantage of being revised by the Prince of Canino, Mr. G. R. Gray, and Mr. Strickland. In an undertaking requiring such extensive consultation of authors, some mistakes, or errors of the press, might be expected, but so far as we have examined it, these are remarkably few; *oreophilus*, p. 53, is *oreophilus*, or rather it should be *oreopölus*, from *öpos*, *mons*, and *πολέω*, *frequentö*.

The Birds of Australia, by J. Gould, F.L.S., &c. Parts VIII. IX. Oblong folio. 1842. The pictorial character and scientific interest of these numbers are sustained; in both we have illustrations of many new genera, (perhaps too many,) and the author is following a very useful practice, of devoting a considerable portion of every number to the illustration of a genus, so that the whole, or a great portion of it, is at once brought under review. Thus, in No. VIII. we have seven species of the old genus *Petroica* figured; the author, however, subdividing it, and placing the old *P. rhodinogaster* under the title of *Erythrodryas*. Again, in No. IX. there are plates of six species of swallows, illustrating five genera.

The Natural History of Selborne, by the late Rev. G. White. New edition, with Notes by the Rev. Leonard Jenyns. London, Van Voorst.

A General History of Animalcules, by A. Pritchard. Part I. London, Whittaker.

History of British Birds, by William Yarrell. Part XXXII. 8vo, August 1, 1842, concludes the history of the Goosanders, and contains those of the Grebes and Divers (*Podiceps*, *Colymbus*).

Faune Belge, 1<sup>ière</sup> Partie, Indication des Mammifères, Oiseaux, Reptiles et Poissons observés jusqu'ici en Belgique, par Edm. De Selys-Longchamps.

*Works preparing for publication.*

Mr. Gould has in preparation an illustrated monograph of the genus *Ortyx*, or strong-billed American partridges.

*Icones Piscium; or Plates of rare Fishes.* By John Richardson, M.D., F.R.S., F.L.S., F.R.G.S., &c.

The fasciculi of this work are intended to appear at intervals, according to the encouragement it may receive. The charge not to exceed the outlay. Fasciculus I. will contain twelve coloured figures, being exact copies of drawings from the portfolio of J. B. Emery, Esq., late first lieutenant of the Beagle surveying vessel, employed on the western coasts of Australia, accompanied by brief notices. Full descriptions of some of the species by Dr. Richardson have appeared in our pages.

PROCEEDINGS OF LEARNED SOCIETIES.

ENTOMOLOGICAL SOCIETY.

March 7th, 1842.—W. W. Saunders, Esq., F.L.S., &c., President, in the Chair.

Mr. Boreham exhibited some curious varieties of *Hipparchia Janira*,